

September 1, 2011

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: Notice of *Ex Parte* Presentation in LightSquared Subsidiary LLC Request for
Modification of its Authority for an Ancillary Terrestrial Component, IB Docket No. 11-
109; IBFS File No. SATMOD-20101118-00239

Dear Ms. Dortch:

On September 31, 2011, at the request of Michael Ha, I met with Brett Greenwalt, Bob Weller, Chip Fleming, Michael Ha and Ron Repasi of the FCC by phone to discuss technical details of an FBAR filter design simulation study for GPS receivers that was included in the TWG Final Report.¹

Avago Technologies offers Film Bulk Acoustic Resonator (FBAR) filters for various wireless communications applications, including GPS. Our business model is based primarily on supplying low-cost filter and integrated filter/LNA solutions for high volume applications, and wireless phones have therefore been a primary focus. The filter simulation study has highlighted various tradeoffs including insertion loss, width of the pass band, adjacent band rejection, and group delay. Design criteria for the simulation included i) rejection bands of 1525-1555MHz and 1626.5-1660.5MHz, ii) pass band of GPS + GLONASS (1565 – 1606MHz for wideband GPS and 1574 – 1606MHz for narrow band GPS), iii) target insertion loss of 1 to 1.5 dB, and iv) 40dB attenuation in the rejection bands.

The simulation result noted that, given the pass band and rejection band criteria, the GPS L1 frequency of 1575MHz falls at the lower edge of filter and therefore affects the insertion loss. If GLONASS support is not required, the pass band can be adjusted so that the L1 frequency is near the center and therefore reduces (improves) the insertion loss.²

Avago has also conducted a feasibility study with i) rejection band of 1525-1536MHz ("lower 10MHz") and 1626.5-1660MHz, ii) pass band of 1559.47 – 1591.47MHz, iii) group delay variation of 6 ns over 1575.42 ±10MHz including temperature and manufacturing tolerances. Avago stated that this study has been provided to TWG but was not included in the TWG Final Report. The lower 10MHz feasibility study presentation is attached to this filing in Attachment A.

Sincerely,

William Mueller
Strategic Marketing Manager
Avago Technologies
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San Jose, CA 95131

Attachment A:
GPS (L1 P-Code) Filter for LightSquared LTE Coexistence
Feasibility Study

¹ See *TWG Final Report, Appendix C.2*
(http://licensing.fcc.gov/myibfs/download.do?attachment_key=900850)

² See page 9 of *Appendix C.2*